

INSTALLATION MANUAL



PC550

This device complies with Parts 15 of the FCC rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Reg. No.: F53CAN-20051-AL-E REN = 0.1B Plug Type: RJ31X

MADE IN CANADA

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INTRODUCTION

FEATURES

- Fully featured security system with Trouble Supervision, Alarm Memory, Master Code and 3 programmable Access Codes, Quick-Arming and At-Home Arming, Door Chime, 3 one-touch Keypad Zones, and more
- Digital Communicator with programmable Communication Formats (20 bps 3/1, 4/1, 4/2)
- 4 End-of-Line Resistor Supervised Zones
- 6 Programmable Zone Types with Silent or Audible alarms
- Programmable Output with 4 options
- All Installer's Programming can be done at the keypad or through downloading
- EEPROM memory retains all programming even after all power is removed from the control panel
- Advanced static and lightning protection; unique "Zap-Trac" circuit board design stops damaging voltages at the wiring terminals, and transient protection devices are placed in all critical areas for further protection

SPECIFICATIONS

PC550 Control Panel

- Four fully programmable zones
- Zones are End-of-Line Resistor supervised
- All zones programmable as 24-Hour Pulsed Alarm zones
- Maximum zone loop resistance: 100 ohms
- Bell/Siren Output: fused for 5A
- Bell / Siren Alarms: steady and pulsed alarms
- Programmable Output: 50 mA with 4 options
- Auxiliary Power Output:
 - 800 mA with 40 VA transformer
 - 500 mA with 20 VA transformer
- Maximum 3 PC550RK or PC500RK Keypads per system, or Keyswitch operation
- Required Battery: 12 VDC
 - 1.2 Ah provides 4 hours of stand-by at 200 mA Auxiliary Output
 - 4.0 Ah provides 4 hours of stand-by at 800 mA Auxiliary Output
- Required Transformer: 16 VAC, 20 - 40 VA
- Panel dimensions: 10" high x 8" wide x 3" deep (254 x 208 x 76 mm)
- Panel Colour: light beige

PC550RK Keypad

- 12-key keypad
- Three one-touch Zones: [F], [A], [P]
- 3 Status Lights: Ready, Armed, System
- 4 Zone Lights
- All new slimline design
- Keypad dimensions: 4.75" high x 2.75" wide x 1.2" deep (120mm x 70mm x 30mm)
- Keypad Colour: Designer White with Grey display

PC500RK Keypad

- 12-key keypad
- Three one-touch Zones: [F], [A], [P]
- 3 Status Lights: Ready, Armed, System
- 4 Zone Lights
- Keypad dimensions: 4.5" high x 4.5" wide x 1" deep (114mm x 114mm x 25.4mm)
- Keypad Colour: Mist

INSTALLATION

Mounting the Panel

Select a dry location close to an unswitched AC source, a ground connection, and the telephone connection.

Remove the printed circuit board, mounting hardware and keypad from the cardboard retainer inside the control panel cabinet. Before attaching the cabinet to the wall, press the four white nylon printed circuit board mounting studs into the raised mounting holes from the back of the cabinet. Also, secure the ground screw to a hole in the cabinet.

Hold the cabinet in position and pull all wires into the cabinet. Mount the cabinet securely to the wall using the mounting screws provided. It is recommended that appropriate wall anchors be used when securing the panel to drywall, plaster, concrete, brick or other similar surfaces.

Press the PC550 Control Panel onto the nylon mounting studs. Pull all cables into the cabinet and prepare them for connection.

Mounting the Keypad

The PC550 Control Panel may be used with the PC550RK or PC500RK Keypad. The Keypad should be located close to the designated "Entry-Exit" door and mounted at a height convenient for all users.

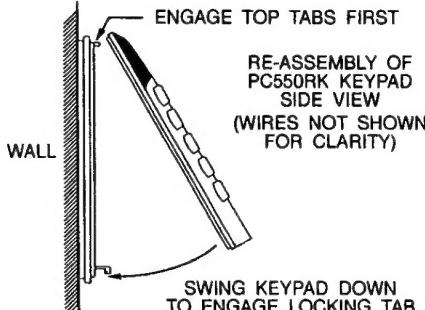
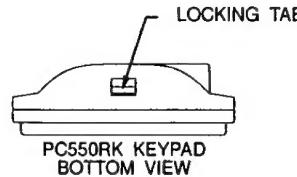
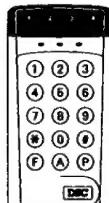
Disassemble the keypad by pressing gently on the locking tab found on the bottom of the unit. With the tab disengaged, pull the backplate from the keypad.

Prepare a hole in the wall at the desired location and pull the keypad wiring through the hole. Hold the backplate in position and pull the wires through the large opening in the backplate. Mount the backplate to the wall using the hardware provided; it is recommended that plastic wall anchors be used. When mounting the backplate, ensure that it is straight and level.

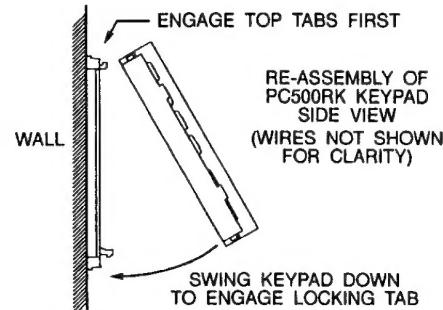
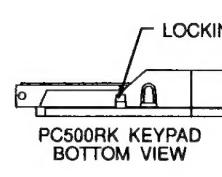
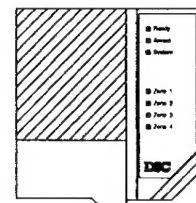
Prepare all wires for connection and connect the keypad wires to the in-wall wiring; refer to the Wiring Diagram in the back of this manual.

Align the keypad with the mounting tabs on the top of the backplate. With the top mounting tabs engaged, swing the keypad down and engage the bottom locking tab. Ensure that the top mounting tabs and the bottom locking tab are securely engaged.

PC550RK Keypad



PC500RK Keypad

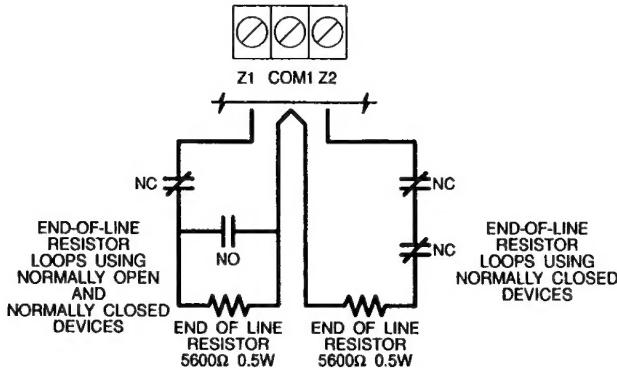


Wiring

NOTE: Complete all wiring to the control panel before applying battery or AC power.

Burglary Zone Wiring

Burglary zone definition, (for example, Delay, Instant, 24-Hour, and so on) is programmed using the keypad. Refer to Programming Guide Section [01].



Burglary Zone Wiring Chart

Wire Gauge	Maximum wire length to End of Line Resistor (feet/meters)
24	1900 / 579
22	3000 / 914
20	2400 / 1493
19	6200 / 1889
18	7800 / 2377

Figures are based on maximum loop resistance of 100 ohms.

Auxiliary Power Connection

The Auxiliary Power Supply can be used to power keypads, motion detectors and other devices that require 12 VDC. The total load for the Auxiliary Power Supply must be calculated for all devices connected across the AUX +/- terminals and for devices connected between the AUX + and PGM terminals. The output current cannot exceed 800 mA when using a 40VA transformer.

PGM Terminal Connections

The PGM terminal is a normally open output that will switch to ground when activated. This output can be controlled by various programming options; refer to Programming Guide Section [04]. Devices controlled by the PGM output must be connected between the PGM terminal and the Aux (+) terminal.

AC Power Wiring

Complete all wiring to the control panel before connecting AC power or the battery. The transformer should not be connected to an outlet that is controlled by a switch.

Battery Connection

If the battery is connected in reverse, the 5 A battery fuse will open and will need to be replaced. The battery charging voltage is factory set and normally needs no adjustment. If the battery charging voltage is out of adjustment, contact your service representative.

If AC power is OFF and the battery voltage drops to approximately 9.5 V or lower, the battery will be automatically disconnected and the panel will power down. To power up again, AC power will have to be re-established. This feature is designed to prevent damage to the battery due to deep discharging.

Telephone Line Wiring

Notice: Ensure that plugs and jack meet the dimension, tolerance and metallic plating requirements of 47 C.F.R. Part 68, Subpart F.

For proper operation, there must be no other telephone equipment connected between the control panel and the telephone company's facilities.

Warning: FCC restricts the use of this equipment on certain types of telephone lines. Read the FCC Compliance Statement at the rear of this manual. Also, do not use this equipment on a telephone line equipped with "call holding" features as the tones generated by these features may interfere with communicator operation.

Do not connect the alarm panel communicator to telephone lines intended for use with facsimile (fax) machines. These lines may incorporate a voice filter which disconnects the line if other than fax signals are detected. This may result in incomplete transmissions from the alarm panel communicator.

Programming and Connections for Keystwitch Arming

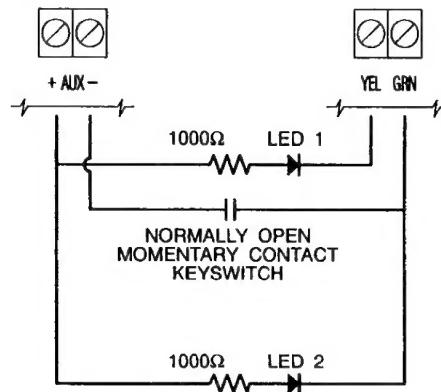
The PC550 may be programmed to enable Keystswitch Arming; refer to Programming Section [05]. Note that when Keystswitch Arming is used, a Keypad cannot be used with the system. Also, Refer to Programming Section [04], Programmable Output Options. Note that Option 01, [*][7] Utility Output Command activates PGM, will not be functional when Keystswitch Arming is enabled.

Programming for Keystswitch Operation

- With power removed from the PC550, connect a PC550RK or PC500RK keypad as shown in the Hook-up Diagram at the back of this manual.
- Apply power to the PC550. Refer to the Programming Guide and the Programming Sections and perform all system programming through the connected keypad. Be sure to enable keystswitch operation in Section [05] by turning Light 1 ON.
- When all programming is complete, remove power from the PC550.
- Remove the keypad from the PC550. Refer to Connections for Keystswitch Operation below and connect a keystswitch module to the PC550.
- Apply power to the PC550; LED 1 on the Keystswitch Module will come ON to indicate that the system is ready to be armed.

Connections for Keystswitch Operation

Connect a momentary contact keystswitch module to the PC550 as shown below:



- LED 1 "Ready" indication: This LED will be ON when the system is ready to be armed; the LED will be shut OFF when the keystswitch is closed and the system is armed, or when a zone is open
- LED 2 "Armed" indication: This LED will be ON when the system is armed; the LED will be shut OFF when the keystswitch is closed to disarm the system
- Exit Delay indication: Both LEDs will be ON during the Exit Delay.

KEYPAD FUNCTIONS

Introduction

The PC550RK or PC500RK Keypad provides complete control of the PC550 control panel. The panel can be completely programmed from the keypad. The 4 zone lights provide alarm and status indication for the alarm circuits, and three function lights advise the user of system status. The built-in sounder lets the user hear correct key entries and other alert signals. Keypad alarms may be activated by pressing and holding the [F], [A] or [P] Keys. Note that all keypad entries are made by pressing one key at a time.

Master Code

A default Master Code "1234" is factory programmed into the PC550. The Master Code is used to arm and disarm the panel, to silence the sounder after an alarm, and to program additional Access Codes. The Master Code may be changed by the user through the [*][5][Master Code] Program Access Codes command.

Installer's Programming Code

A default Installer's Programming Code "0550" is programmed into the PC550. Using this code and the [*][8] command, the installer can perform programming functions. This code should be changed by the installer after the system is installed.

Arming

Before arming the panel, close all protected doors and windows and stop movement in areas protected by motion detectors. If the "System" light is on, check for trouble conditions (refer to [*][2]: Display Troubles) and correct the condition. Ensure that any bypassed zones are bypassed intentionally; refer to [*][1][Access Code]: Bypass Zones. If the "Ready" light is not on, one or more zones are open; the system can only be armed when the "Ready" light is ON.

To arm the system, enter a 4-digit Access Code. As each digit is entered, the keypad sounder will beep. When the Access Code has been entered, the "Armed" light will come ON and the keypad will beep 6 times. If the Access Code has been entered incorrectly, the keypad will sound a single long tone; press the [#] Key and enter the Access Code again.

When an Access Code has been entered and the "Armed" light is ON, leave the premises through the designated Entry-Exit door before the Exit Delay expires. At the end of the Exit Delay, all lights on the keypad will be shut OFF except for the "Armed" light.

The default setting for the Exit Delay is 120 seconds. Refer to Programming Section [01] Zone Definitions for information on zone types that are affected by the Exit Delay. Also refer to Programming Section [02] for instructions on changing the Exit Delay.

Auto-Bypass/Home-Away Arming

If an Access Code is entered and the Exit-Entry zone is not activated, the system will arm with interior zones automatically bypassed if those zones have been programmed as Home-Away Zones.

This feature is designed for the user who wishes to remain at home with the system armed. When this feature is enabled, the user does not have to manually bypass the interior zones.

At-Home Arming

To eliminate the Entry Delay, arm the system by entering [*][9][Access Code]; an exit through a Delay Zone may then be made as in normal arming. The system will arm as described above in Auto-Bypass/Home-Away arming whether an exit is made or not. The "Armed" light will FLASH to indicate that the system is armed and that there is no entry delay on any of the Delay Zones. If any zone other than a Home-Away zone is activated, an alarm will sound immediately.

Disarming

Enter the premises through the designated Entry-Exit door. The keypad will be sounding a tone to indicate that the system must be disarmed. Go to the keypad and enter an Access Code. If an error is made entering the code, press the [#] Key and enter the code again. The "Armed" light will be shut OFF and the keypad sounder will be silenced. An Access Code must be entered before the Entry Delay expires or an alarm will sound. To change the Entry Delay, refer to Programming Section [02].

If an alarm occurred while the system was armed, the "System" light and the zone lights of the zones that went into alarm will FLASH for two minutes. Press the [#] Key to cancel the flashing display and to return the panel to the "Ready" mode. Refer to [*][3]: Alarm Memory Display.

Important Note about Keypad [*] Commands

The [*] commands will not function when the system is disarmed and the bell or siren is active. In order to use the [*] functions, an Access Code must first be entered to silence the alarm.

[*]+[0]: Quick-Arm

The Quick-Arm feature allows a user to enter [*][0] to arm the system. This command is designed to allow someone to arm the system without that person having to be provided with an Access Code. When [*][0] is entered, the Exit Delay will begin and the user may exit the premises through the Entry/Exit door. At the end of the Exit Delay, the system will be fully armed; activating any zone will cause an alarm.

[*]+[1]+[Access Code]: Zone Bypassing

A bypassed zone will not cause an alarm. Use zone bypassing when access is needed to part of a protected area when the system is armed, or if damage to sensors or wiring cannot be repaired immediately. The system may be armed with one or more zones bypassed even if the zones are open.

With the system disarmed, enter [*][1][Access Code] to display the bypassed zones; the zone lights of bypassed zones will come ON. Ensure that any zone displayed as being bypassed is intentionally bypassed. Zone bypasses are automatically cancelled when the panel is disarmed.

To Bypass Zones:

Enter [*][1][Access Code]; the "System" light will FLASH. Enter the number of the zone to be bypassed; a zone light will come ON to indicate that the zone is bypassed. To remove a bypass, enter the zone number and its light will be shut OFF. When all desired zones are bypassed, press the [#] Key to return to "Ready".

[*]+[2]: Display Trouble Conditions

The PC550 continuously monitors a number of trouble conditions. If one of these conditions occurs, the keypad "System" light will come ON and the sounder will sound two short beeps every 10 seconds. To silence the sounder, press the [#] Key; the sounder will be silenced but the "System" light will remain ON until the trouble condition is cleared. Refer to Programming Section [11] Maintenance Codes for a list of trouble conditions that can be reported to the monitoring station.

To display trouble conditions, enter [*][2]. Trouble conditions are represented with the zone lights; if a zone light comes ON, then that trouble condition is present:

Zone Light

- 1 Battery Trouble.** If the battery is disconnected, its voltage is low or the battery fuse is open, a trouble will be displayed and can be reported.
- 2 AC Failure.** If AC power is removed from the system, an AC trouble will be displayed.
- 4 Unsuccessful Communication Attempt.** If the digital communicator cannot communicate with the monitoring station after 8 attempts, a trouble is generated. If a later attempt at communication is successful, the trouble is cleared. The trouble can also be cleared by pressing the [#] Key to exit from the Display Trouble Conditions mode.

NOTE: If only an AC Failure trouble is present, the keypad sounder will not beep.

[*]+[3]: Display Alarm Memory

Alarms caused during the previous armed period are stored in memory. To display the zones that went into alarm, enter [*][3]. The "System" light will FLASH and the alarms will be displayed on the flashing zone lights.

Note that the alarm memory will be cleared the next time the system is armed.

[*]+[4]: Bell Test

Entering this command will sound the siren and turn ON all the keypad lights for 2 seconds.

[*]+[5]+[Master Code]: Program Access Codes

The [*][5][Master Code] command allows the user to program the Master Code and 3 additional Access Codes.

Programming Access Codes:

Enter [*][5][Master Code]. The "Ready", "Armed" and "System" lights will FLASH and the zone lights will indicate which Access Codes have been programmed and which Access Code is presently being programmed:

Zone Light	Access Code is...
OFF	not programmed
ON steady	programmed
Flashing	presently being programmed

When the [*][5][Master Code] command is entered, Zone Light 1 will be ON to indicate that the Master Code is programmed with the factory default code.

Changing or Adding a Code

To change Access Codes 1 to 4, enter the number of the code to be changed; the corresponding zone light will begin to FLASH. Enter a new 4-digit Access Code; **do not press [*] or [#] when entering the code**. After the code is entered, the keypad will beep 3 times and the zone light will stop flashing and remain ON. If an existing code is being changed, the new code will replace the old one. If another code is to be changed, press the number key for the code to be programmed and enter the new 4-digit code. When all desired changes are complete, press the [#] Key to return to "Ready".

Erasing a Code

To erase a code, enter [*][5][Master Code]. Enter the number of the code to be erased; the zone light for the code will FLASH. Enter [****] to erase the Access Code. **NOTE: Do not erase the Master Code!** If the Master Code is accidentally erased, reset the system's programming to the factory default settings. Refer to "Resetting Programming to the Factory Default Settings" for instructions on restoring the system's factory default programming.

[*]+[6]: Door Chime On/Off

The Door Chime feature causes the keypad to beep whenever a Delay or Instant Zone is activated. This feature is useful if the Entry/Exit door or doors are out of view, and the user desires an indication of when the door zones are opened and closed. The Door Chime feature only functions when the system is disarmed.

To turn the Door Chime feature on or off, enter [*][6]. If the feature is being turned ON, the keypad sounder will beep 3 times. If the feature is being turned OFF, the sounder will emit a single long tone.

[*]+[7]: Utility Output Command

If Programming Section [04] is programmed as [01], entering [*][7] on the keypad will activate the keypad sounder and the PGM output for 5 seconds.

This feature can be used to operate devices such as door strikes or special lighting. Note that if Keypad Arming is being used with the system, this command will not be functional.

[*]+[8]+[Installer's Code]: Installer's Programming Command

The PC550 is programmed from the keypad by using commands in the [*][8][Installer's Code] section. These commands are described in detail in the Programming Section of this manual. The default Installer's Code is [0550].

[*]+[9]+[Access Code]: At-Home Arming

Entering [*][9] before entering an Access Code will arm the panel and remove the Entry Delay from the Delay Zones. All "Home-Away" zones will be automatically bypassed.

When the system is armed using the [*][9][Access Code] command, the "Armed" light will FLASH to remind the user that the Entry/Exit zones do not have the Entry Delay. This command allows the user to remain on the premises and have an instant alarm on the entry doors.

Keypad Zones

Three types of alarm may be activated by pressing and holding a single key on the keypad. For these alarms to be transmitted, Alarm Reporting Codes must be programmed in Section [11].

- [F]** Press and hold the [F] Key for 2 seconds to sound an [F] Key alarm. The siren will sound a pulsed tone, and the alarm will be reported to the monitoring station. The keypad will sound a series of short beeps once the system has accepted the alarm.
- [A]** Press and hold the [A] Key for 2 seconds to generate an [A] Key alarm. An alarm will be transmitted to the monitoring station, but the siren will not sound when this function is activated. The keypad will sound a series of short beeps once the system has accepted the alarm.
- [P]** Press and hold the [P] Key for 2 seconds to generate a [P] Key alarm. An alarm will be transmitted to the monitoring station. The [P] Key alarm may be programmed as either silent or audible; refer to Programming Section [05]. When programmed as "audible", the bell or siren will sound a steady alarm tone and the keypad will sound a series of short beeps once the system has accepted the alarm. When programmed as "silent", the bell or siren **will not sound** on alarm and the keypad **will not beep** to indicate that the system has accepted the alarm.

Adjusting the Keypad Sounder Tone

The tone of the Keypad's sounder may be adjusted by pressing and holding the [#] Key. Press and hold the [#] Key; after two seconds, the sounder will begin to beep. With each beep, the tone or pitch of the beep will either increase or decrease. When the desired tone is achieved, release the [#] Key. To adjust the tone in the opposite direction, release the [#] Key, and then press and hold the [#] Key again.

If power to the system is shut off, the Keypad tone will be restored to the factory-set tone when power is restored to the system.

PROGRAMMING GUIDE

With the panel disarmed, enter [*][8][Installer's Code]. The panel can only be programmed while it is disarmed. The default Installer's Code is [0550]. The Installer's Code should be changed after the system is installed; refer to Programming Section [03].

When the Installer's Programming Command is entered, the "Armed" light will come ON and the "System" light will FLASH to indicate that the panel is ready for programming. **NOTE:** If no key entry is made for 2 minutes, the panel will return to the "Ready" mode and the Installer's Programming Command will have to be entered again.

With the "Armed" light ON and the "System" light flashing, enter 2 digits for the Section to be programmed. The Programming Sections are numbered from [01] to [12], and each section is programmed independently.

Once the 2 digits for the section to be programmed are entered, the keypad will beep 3 times; the system is now ready to accept data for the selected section. In sections that contain groups of 2-digit numbers, the keypad will beep twice after each 2-digit number is entered.

To change the first digit in a section, enter a new digit from the keypad. If you wish to keep the first digit unchanged, enter the same number.

When all data for the section is completely entered, the keypad sounder will beep several times to indicate that all expected data has been entered. When a section is completely programmed, enter the number of the next section to be programmed.

Sections [05] and [06]

These sections allow you to enable or disable various system functions. Refer to the Programming Worksheets to see which features are represented by the Zone Lights. If a feature is enabled, its Zone Light will be ON; if a feature is disabled, its Zone Light will be OFF.

To enable or disable a feature, press a number from 1 to 4. If a feature is being enabled, its light will come ON; if a feature is being disabled, its light will be shut OFF. When all selections have been made, press the [#] Key to save the changes and return to the program mode.

HEX Data Programming

Certain programming entries may require the entry of data in HEX (hexadecimal, or base 16) format. HEX numbering uses the digits 0 through 9 and the letters A through F.

The letters A through F are represented by the number keys 1 through 6. To enter data in HEX format, first press the [*] Key. The "Ready" and "System" lights will FLASH. Enter the HEX value, then press the [*] Key again to return to the normal data entry mode; the "Ready" light will stop flashing, and the "System" light will continue to flash.

To enter HEX numbers:

A	Enter	[*][1][*]
B	Enter	[*][2][*]
C	Enter	[*][3][*]
D	Enter	[*][4][*]
E	Enter	[*][5][*]
F	Enter	[*][6][*]

Enter [*] **before** and **after** each digit. The last digit in each section does not require the final asterisk (*) to be entered.

Resetting Programming to the Factory Default Settings

The system may be reset to its factory default programming by following this procedure:

- 1 Remove all power, AC and battery, from the PC550
- 2 Remove all wiring connections from the PGM and Zone 1 terminals
- 3 Connect the PGM and Zone 1 terminals together
- 4 Apply power to the PC550 and wait for 10 seconds
- 5 After approximately 10 seconds, the keypad sounder will beep and Zone Light 1 will come ON
- 6 Remove all power, AC and battery, from the PC550
- 7 Remove the connection between the PGM and Zone 1 terminals
- 8 Re-connect original wiring to the PGM and Zone 1 terminals
- 9 Restore power to the PC550; the Programming Sections have now been restored to the factory default settings

PROGRAMMING SECTIONS

[01] Zone Definitions

Enter four 2-digit numbers in this section to determine the operating characteristics of each zone.

Zone Definitions: Digit 1

The first digit of each Zone Definition determines each zone's audible alarm characteristics. When programmed as *audible*, the siren will sound on alarm; when programmed as *silent*, the siren will not sound on alarm.

Note that zone response times are factory set at 500 ms.

Zone Definitions: Digit 2

Digit 2 determines the zone type as described below:

[0] Standard Delay: The Standard Delay Zone is normally used for Entry/Exit doors. The Exit Delay starts when the system is armed; the zone may be opened and closed during the delay without causing an alarm. When the Exit Delay expires, opening the zone will start the Entry Delay. During the Entry Delay, the keypad buzzer will sound steadily to indicate that the system should be disarmed. If the system is disarmed before the Entry Delay expires, no alarm will be generated.

Entry and Exit Delay times may be independently programmed for 1 to 255 seconds in Section [02]. The default settings are 120 seconds for the Exit Delay, and 30 seconds for the Entry Delay. **NOTE:** Do not program the Entry or Exit Delays with [000].

[1] Instant: Instant Zones are normally used for door and window contacts. Instant Zones have the standard Exit Delay, but will generate an *instant* alarm when opened after the Exit Delay expires. Refer to Section [02] for information on programming the Exit Delay; the default setting for the Exit Delay is 120 seconds.

[2] Interior: Interior Zones are normally used with interior motion detectors and have the standard Exit Delay. The zone will also have the standard Entry Delay provided that a Delay Zone has been activated before the Interior Zone. If the premises are entered without coming through a Delay zone and an Interior zone is tripped, an alarm will be generated.

[3] Home-Away with Delay: Home-Away Zones operate similarly to Interior Zones with the following additional feature: if the system is armed and a Delay zone is not activated during the Exit Delay time, the Home-Away zones will be automatically bypassed. This feature allows the system to be armed with the Interior Zones automatically bypassed so that the user may remain on the premises.

If a Delay Zone is activated during the Exit Delay, the Entry Delay will be applied to Home-Away with Delay zones when the Exit Delay expires. If a Home-Away with Delay zone is then activated, the Entry Delay will be initiated. If a Home-Away with Delay zone is activated during the Entry Delay, that zone will follow the Entry Delay before generating an alarm if the system is not disarmed.

If the system is armed with the [*][9][Access Code] At-Home Arming Command, zones programmed as Home-Away with Delay will remain bypassed until the system is disarmed.

[4] 24-Hour Bell: 24-Hour Bell Zones are active at all times and will sound an alarm even if the panel is disarmed. 24-Hour Bell Zones will activate the bell/siren output if programmed for audible operation. Alarms on these zones are communicated immediately.

[5] 24-Hour Pulsed Alarm Zone: 24-Hour Pulsed Alarm Zones are active at all times and will sound an alarm even if the panel is disarmed. Alarms on these zones are communicated immediately. **NOTE:** 24-Hour Pulsed Alarm Zones should always be programmed as audible so the bell/siren output will be activated when an alarm is generated. If a silent 24-Hour Zone is required, program the zone as [14].

[02] System Times

Three system times are programmed in Section [02]; each time requires a 3-digit number. Do not press the [#] Key during data entry.

[1] Entry Delay (001 to 255 seconds) The Entry Delay determines the amount of time permitted between the activation of a Delay Zone and the disarming of the system. If the system is not disarmed during this delay, an alarm will be generated. Refer to Section [01] for information on which zone definitions are affected by the Entry Delay. The default Entry Delay is 30 seconds.

[2] Exit Delay (001 to 255 seconds) The Exit Delay determines the amount of time permitted between entering an Access Code to arm the system and the activation of a Delay Zone to exit the premises. Refer to Section [01] for information on which zone definitions are affected by the Exit Delay. The default Exit Delay is 120 seconds.

[3] Bell Cut-Off (001 to 255 minutes) This time determines how long the bell/siren will sound when an alarm is generated. When an alarm is initiated, the bell/siren will sound for this length of time, or until the alarm is silenced by entering an Access Code. The default setting is 4 minutes.

[03] Installer's Code

The default setting for the Installer's Code is [0550]. It is strongly recommended that the Installer's Code be reprogrammed before installation is complete. Be sure to record the new Installer's Code for later reference.

[04] Programmable Output Options (PGM Terminal)

The PGM output can be programmed to operate in response to various panel operations. The output pulse connects the PGM terminal to ground.

[01] Utility Output

When activated by entering the [*][7] command, the PGM output will switch to ground for 5 seconds and the keypad buzzer will sound.

[02] Keypad Sounder Follow Mode

The PGM output will switch to ground as long as the keypad buzzer is ON. For example, the PGM output will switch to ground when the keypad buzzer sounds during the Entry Delay. Do not enable the Door Chime feature when using Keypad Arming and this output type.

[03] Latched Alarm Output

The PGM switches to ground on an alarm and remains switched to ground until the panel is disarmed. This output can be used to indicate that an alarm has occurred before entering the premises.

[04] Remote Operation (through Downloading)

When programmed for Remote Operation, the PGM output can only be turned ON (switched to ground) or turned OFF on command from the downloading computer. This function may be used to activate a sounder or other device to indicate that downloading is in progress.

[05] 1st System Option Code

When Section [05] is entered, the 4 Zone Lights will indicate which options are enabled. If a light is ON, that option is enabled; if a light is OFF, that option is disabled.

To enable or disable an option, press a number from [1] to [4]. If the light indicating the option was OFF, it will come ON; if the light indicating the option was ON, it will go OFF.

LIGHT

- [1] • ON = Keyswitch Arming enabled
 - OFF = Keyswitch Arming disabled
- [2] • ON = [P] Key: silent alarm
 - OFF = [P] Key: audible alarm
- [3] • OFF = **For Future Use**
- [4] • OFF = **For Future Use**

[06] 2nd System Option Code

Refer to Section [05] for programming information.

LIGHT

- [1] • ON = DTMF dialing
OFF = Pulse dialing
- [2] ON = 1400 Hz Handshake
• OFF = 2300 Hz Handshake
- [3] ON = DLS Answer enabled
• OFF = DLS Answer disabled
- [4] • OFF = **For Future Use**

- Factory default settings

If DLS Answer is **disabled**, the PC550 will not answer calls from a downloading computer.

If DLS Answer is **enabled**, the PC550 will only connect to the downloading computer using the "double call" technique. The system must be called by the downloading computer, and the computer must allow the telephone line to ring only once or twice. After one or two rings, the downloading computer must hang-up the line and then place another call to the PC550 within 60 seconds. The PC550 will then answer the second call on the first ring. Note that the "double call" technique is the only means of connecting to the downloading computer.

Disabling Communications

To disable the communicator, program all the reporting codes in Sections [09], [10] and [11] with HEX "FF".

[07] Phone Number

This is the telephone number the Communicator will dial when an alarm is generated. Enter the telephone number the same way it would be dialled on a touch-tone phone. Press [#] after the last digit to complete the telephone number programming.

A pause of 2 seconds can be added by entering HEX 'D' between digits in the phone number. To enter HEX 'D', press [*] [4] [*]. The total number of digits and pauses must not exceed 17. **NOTE:** Do not program any HEX digits other than 'D' in the telephone number.

[08] Customer Account Code

The Customer Account Code is always transmitted to the telephone number to identify the customer. Enter a 4-digit number in Section [08]; HEX digits may be used in the Account Code. Where a zero is required in the account code, enter HEX 'A' [*] [1] [*]. If a 3-digit code is required, as in 3/1 formats, enter [0] as the LAST digit. The [0] represents a null digit where no pulses are transmitted.

[09] Zone Alarm and Restoral Reporting Codes

When Section [09] is entered, the panel expects eight 2-digit numbers for the Alarm and Restoral Reporting Codes for zones 1 to 4. The alarm codes are transmitted when there is an alarm on a zone; the restoral codes are transmitted on bell time-out, or when the alarm is silenced by entering an Access Code.

[10] Opening and Closing Reporting Codes

When the system is disarmed (opened) or armed (closed), an opening or closing reporting code will be transmitted to indicate which Access Code was used to disarm or arm the system.

[11] Maintenance and Priority Codes

Maintenance Codes are transmitted to indicate various trouble conditions and their restorals; Priority Codes are used to indicate the activation of the [F], [A] and [P] keys. Program a 2-digit code for each of the following conditions:

• [P] Key alarm	• Battery Trouble
• [A] Key alarm	• Battery Trouble Restore
• [F] Key alarm	• Periodic Test Code

The Periodic Test Code is transmitted to the monitoring station once every 24 hours. The first transmission will be sent 12 hours after the system is first powered, and then once every 24 hours after the initial transmission.

[12] Downloading Access Code

This 4-digit code allows the panel to confirm that it is communicating with a valid downloading computer. Enter a 4-digit code using the numbers 0 through 9 and the hexadecimal numbers A through F. The default code is [0505].

FOR THE RECORD

Customer _____

Address _____

Phone _____

Installation Date _____

CONTACTS

Name _____

Phone _____

Name _____

Phone _____

Name _____

Phone _____

ZONE INFORMATION

Zone	Type	Protected Area
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____

Entrance Delay _____

Exit Delay _____

Bell Cutoff _____

KEYPAD ZONES

[P] Key Silent Audible Communicator Enabled Disabled

NOTES

PROGRAMMING WORKSHEETS

[01] Zone Definitions Page 13

NOTE: When defining zones, assign Delay Zones starting with Zone 1, then Zone 2, and so on. Then, assign the other zone types to the remaining zones in any order desired.

Default		Digit 1	Digit 2
<u>0,0</u>	<u> </u>	Zone 1	[0] Audible [1] Silent
<u>0,1</u>	<u> </u>	Zone 2	[0] Standard Delay [1] Instant
<u>0,2</u>	<u> </u>	Zone 3	[2] Interior [3] Home-Away with Delay
<u>0,2</u>	<u> </u>	Zone 4	[4] 24-Hour Bell [5] 24-Hour Pulsed Alarm

[02] System Times Page 14

Default

0,3,0 Entry Delay (seconds)

1,2,0 Exit Delay (seconds)

0,0,4 Bell Cut-off (minutes)

Valid entries are "001" to "255"; do not enter "000".

[03] Installer's Code Page 14

Default

0,5,5,0

[04] Programmable Output Options (PGM Terminal) Page 14

Default

<u>0,1</u> <u> </u>	Programmable Output	[01] [*][7] Utility Output Command activates PGM [02] PGM follows Keypad Buzzer [03] Latched alarm [04] Remote Operation (through Downloading)
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[05] 1st System Option Code Page 14

Default

		Zone Light ON	Zone Light OFF
<u>OFF</u>	<u> </u>	Zone Light 1	Keystitch arming enabled
<u>ON</u>	<u> </u>	Zone Light 2	[P] Key: silent alarm
<u>OFF</u>	<u> </u>	Zone Light 3	For Future Use
<u>OFF</u>	<u> </u>	Zone Light 4	For Future Use

[06] 2nd System Option Code Page 15

Default		Zone Light ON	Zone Light OFF
<u>ON</u>	<input type="checkbox"/>	Zone Light 1 DTMF dialing	Pulse dialing
<u>OFF</u>	<input type="checkbox"/>	Zone Light 2 1400Hz Handshake	2300Hz Handshake
<u>OFF</u>	<input type="checkbox"/>	Zone Light 3 DLS Answer enabled	DLS Answer disabled
<u>OFF</u>	<input type="checkbox"/>	Zone Light 4 For Future Use	

[07] Phone Number Page 15

Enter [0] for the digit 0 in the phone number. Enter [*4*] (HEX D) for a 2-second pause between number digits. Enter [#] to end the phone number entry

[08] Customer Account Code Page 15

Enter [*1*] (HEX A) for the digit "0" in the account code. For a 3-digit code, enter [0] for the 4th digit.

[09] Zone Alarm and Restoral Reporting Codes Page 15

For single digit reporting codes, enter [0] as the second digit.

- Zone 1 Alarm Enter [*1*] (HEX A) to transmit a "0" (zero = 10 pulses)
- Zone 2 Alarm
- Zone 3 Alarm
- Zone 4 Alarm
- Zone 1 Restoral
- Zone 2 Restoral
- Zone 3 Restoral
- Zone 4 Restoral

NOTE: 24-Hour Zone restorals are transmitted when the zone is restored. All other restorals are transmitted on Bell Time-out, or when the alarm is silenced by entering an Access Code.

[10] Opening and Closing Reporting Codes Page 15

For single digit reporting codes, enter [0] as the second digit.

- _____ Closing, Access Code 1 Enter [*1*] (HEX A) to transmit a "0" (zero = 10 pulses)
- _____ Closing, Access Code 2
- _____ Closing, Access Code 3
- _____ Closing, Access Code 4
- _____ Opening, Access Code 1
- _____ Opening, Access Code 2
- _____ Opening, Access Code 3
- _____ Opening, Access Code 4

[11] Maintenance and Priority Codes Page 16

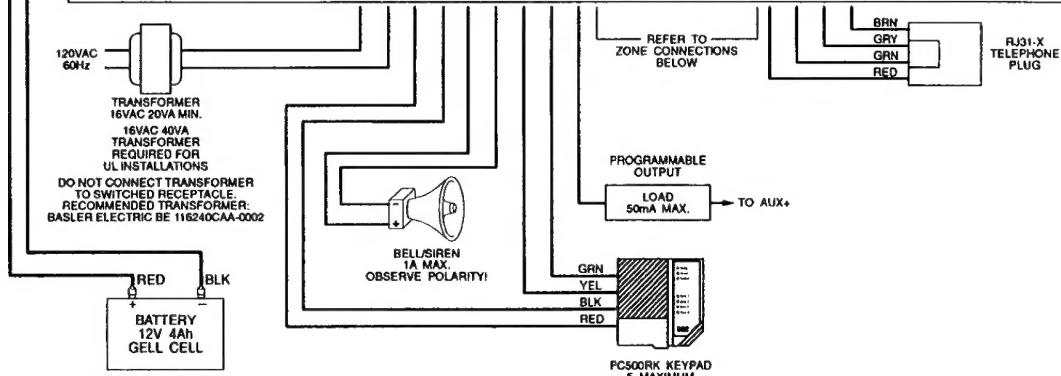
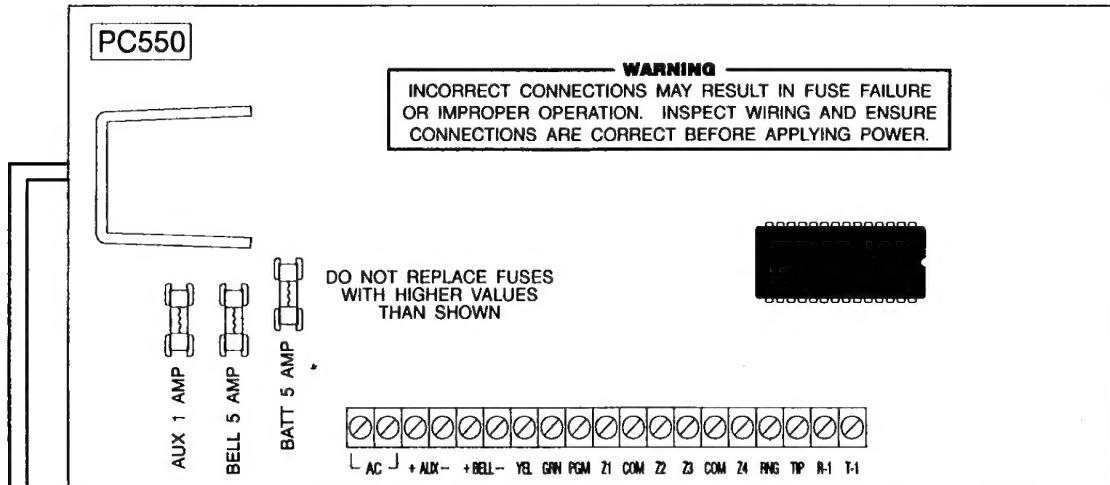
- _____ [P] Key Alarm
- _____ [A] Key Alarm
- _____ [F] Key Alarm
- _____ Battery Trouble
- _____ Battery Restore
- _____ Periodic Test Code

[12] Downloading Access Code Page 16*Default*

0,5,0,5 _____

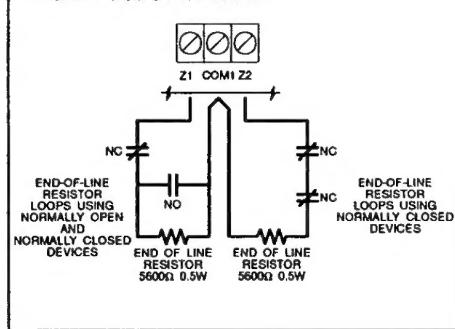
This code allows the panel to confirm that a valid downloading computer is requesting access to the panel.

HOOK-UP DIAGRAM



BATTERY CAPACITY FOR EMERGENCY STAND-BY IS AT LEAST 4 HOURS IF THE TOTAL LOAD (BELL & AUX OUTPUTS) IS 800mA OR LESS. BATTERY CHARGE CURRENT IS 360mA MAX. RECOMMENDED BATTERY: YUASA NP4-12.

TYPICAL BURGLARY ZONE CONNECTIONS



Recognized limited energy cable should be used. Observe local codes as defined by the authority having jurisdiction.

Refer to Installation and Instruction Manuals for complete operating instructions.

Detection devices that require power from the Control Panel should operate over the range of 10.0 to 14.0 VDC.

The DSC BRAVO models are recommended motion detectors. The DSC DG-50 is a recommended glassbreak detector.

Temperature Range: 0°C to 49°C (32°F to 120°F). Maximum Humidity: 85% relative humidity

LIMITED WARRANTY

Digital Security Controls Ltd. warrants that for a period of twelve months from the date of purchase, the product shall be free of defect in materials and workmanship under normal use and that in fulfilment of any breach of such warranty, Digital Security Controls Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls Ltd. This warranty contains the entire warranty. Digital Security Controls Ltd. neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Digital Security Controls Ltd. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

WARNING: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

FCC Compliance

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4

Important Information

This equipment complies with Part 68 of the FCC Rules. On the side of this equipment is a label that contains, among other information, the FCC registration number of this equipment.

Notification to Telephone Company: Upon request, the customer shall notify the telephone company of the particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

FCC Registration Number: F53CAN-20051-AL-E Ringer Equivalence Number: 0.1B USOC Jack: RJ-31X

Telephone Connection Requirements: Except for the telephone company provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of the terminal equipment. Standard jacks shall be so arranged that, if the plug connected thereto is withdrawn, no interference to the operation of the equipment at the

customer's premises which remains connected to the telephone network shall occur by reason of such withdrawal.

Incidence of Harm: Should terminal equipment or protective circuitry cause harm to the telephone network, the telephone company shall, where practicable, notify the customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if such action is deemed reasonable in the circumstances. In the case of such temporary discontinuance, the telephone company shall promptly notify the customer and will be given the opportunity to correct the situation.

Additional Telephone Company Information: The security control panel must be properly connected to the telephone line with a USOC RJ-31X telephone jack. The FCC prohibits customer-provided terminal equipment be connected to party lines or to be used in conjunction with coin telephone service. Inter-connect rules may vary from state to state.

Changes in Telephone Company Equipment/Facilities: The telephone company may make changes in its communications facilities, equipment, operations or procedures, where such actions are reasonably required and proper in its business. Should any such changes render the customer's terminal equipment incompatible with the telephone company facilities the customer shall be given adequate notice to the effect modifications to maintain uninterrupted service.

Ringer Equivalence Number (REN): The REN is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

Equipment Maintenance Facility: If you experience trouble with this telephone equipment, please contact the facility indicated below for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

Digital Security Controls Ltd.
160 Washburn Street
Lockport, NY 14094